

Appl. No. 09/853,227
Atty. Docket No. 4519RC2R2
Amdt. Dated October 17, 2006
Reply to Office Action of April 17, 2006
Customer No. 27752

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REMARKS

Claims 1, 3-23, and 25-39 are pending in the present application. No additional claims fee is believed to be due. Claims 13, 17, 28-37 are deemed currently withdrawn as a result of an earlier restriction requirement. Claims 1, 3-12, 14-16, 18-23, 25-27 and 38-39 are under consideration.

Claim 1 has been further amended wherein the cationic charge density of the water soluble, organic, cationic polymer hair conditioning agent is further amended to be in a range of from about 0.3 to about 0.8 meq/gm. Support for this amendment is found in Claim 5, now cancelled, and in the specification on page 13, line 18.

Claim 4 is cancelled, as the matter of claim 4 was previously included in Claim 1, now amended.

It is believed these changes do not involve any introduction of new matter. Consequently, entry of these changes is believed to be in order and is respectfully requested.

35 U.S.C. § 102(e)

Claims 1, 3-12, 14-16, 18-23, 25 and 26 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 5,977,036 (Guskey). Applicants respectfully traverse this rejection.

Guskey discloses hair styling shampoo compositions which comprise from about 5% to about 50% by weight of a surfactant selected from the group consisting of anionic surfactants, zwitterionic or amphoteric surfactants having an attached group that is anionic at the pH of the composition, from about 0.025% to about 3% by weight of an organic cationic polymer having a cationic charge density of from about 0.2 meq/gm to about 7 meq/gm and a molecular weight of from about 5000 to about 10 million, from about 0.1% to about 10% by weight of a water-insoluble hair styling polymer, from about 0.1% to about 10% by weight of a water-insoluble volatile solvent, and from about 0.005% to about 2.0% by weight of a crystalline hydroxyl-containing stabilizing agent and from about 26.5% to about 94.9% by weight of water.

As previously amended, the present invention is directed towards a hair conditioning shampoo composition comprising from about 5% to about 50%, by weight, of a surfactant component selected from the group consisting of alkyl and alkyl ether sulfates, sulfonates or mixtures thereof, from about 0.01% to about 5%, by weight, of a water soluble, organic, cationic polymer hair conditioning agent having a cationic charge density of from about 0.3 meq/gram to about 0.8 meq/gram and wherein the water soluble, organic, cationic polymer hair conditioning agent has a molecular weight greater than 600,000; and an aqueous carrier; wherein the cationic polymer is in a complex coacervate phase in the shampoo composition or forms a complex

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coacervate upon dilution of the shampoo composition with water. By this combination, the lower charge density cationic polymer will yield higher levels of coacervate and therefore higher wet conditioning benefits to the hair.

Guskey's disclosure of from about 0.025% to about 3% of an organic cationic deposition polymer which has a cationic charge density of from about 0.2 meq/gm to about 7 meq/gm and an average molecular weight of from about 5,000 to 10 million of a cationic polymer does not qualify as an anticipation of Applicants' claimed range. For a prior art range to anticipate the claimed invention's range, it must be disclosed with "sufficient specificity" (see MPEP 2131.03). Applicants contend that Guskey's broad range is too broad to sufficiently specify Applicants' range of from about 0.3 meq/gm to about 0.8 meq/gm of a cationic charge density for a cationic polymer hair conditioning agent. For example, Applicants' high end of the range is eight times lower than that broadly disclosed and claimed in Guskey.

MPEP 2131.03 states that "when the prior art discloses a range which touches, overlaps or is within the claimed range, but no specific examples falling within the claimed range are disclosed, a case by case determination must be made to anticipation. In order to anticipate the claims, the claimed subject matter must be disclosed in the reference with "sufficient specificity" to constitute an anticipation under the statute." What constitutes a sufficient specificity" is fact dependent. If the claims are directed to a narrow range, the reference teaches a broad range, and there is evidence of unexpected results within the claimed narrow range, depending on the other facts of the case, it may be reasonable to conclude that the narrow range is not disclosed with "sufficient specificity" to constitute an anticipation of the claims. - - "

Therefore, while Guskey broadly discloses cationic polymers having a charge density of 0.2- 7 meq/gm and a molecular weight of 5000 to 10 million, and even further discloses Polyquaternium 10, the only Polyquaternium 10 exemplified is JR 30M, which has a MW of 900,000 and a cationic charge density of 1.25. Therefore, Guskey does not exemplify a cationic polymer having a cationic charge of from about 0.3 to about 0.8 meq/gm, as required by the present invention.

Further, Guskey neither discloses nor makes obvious the present invention's requirement that a surfactant component selected from the group consisting of alkyl and alkyl ether sulfates, sulfonates or mixtures thereof, is *in combination* (emphasis added) with a lower charge density cationic polymer. The selection of this specific surfactant in combination with a lower charge density cationic polymer yields significantly higher levels of coacervate when compared to the compositions disclosed and exemplified in Guskey. Guskey broadly discloses a detergent surfactant selected from the group consisting of anionic surfactants, zwitterionic and amphoteric surfactants and combinations thereof. Clearly Guskey's broad disclosure of surfactants, would not lead to the present invention, as now amended, and specifically limited to alkyl and alkyl ether sulfates, sulfonates or mixtures thereof. The novelty of the alkyl and alkyl ether sulfates and

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sulfonate surfactants, is that by selecting these specific surfactant, in combination with a low charge density/higher molecular weight cationic polymer, the present invention has resulted in significant increase in coacervate deposition and thus higher wet conditioning benefits to the hair.

Further, Guskey exemplifies (Column 28) the combination of an anionic surfactant in combination with a high level of amphoteric surfactant, namely Lauroamphoacetate at 6%, and further in combination with a cationic polymer in the broad range of 0.2 – 7 meq/gm and a molecular weight of 5000 to 10 million. Guskey's teachings and claims of the combination of an anionic surfactant with an amphoteric surfactant, for example at 6% Lauroamphoacetate, results in a lower coacervate deposition. However, for the present invention, by selection of an alkyl and alkyl ether sulfates, sulfonates or mixtures thereof in combination with the selection of a low charge density polymer at a higher molecular weight (0.3 meq/gram to about 0.8 meq/gram with a molecular weight of greater than 600,000) there is an increase in coacervate deposition and thus higher wet conditioning benefits to the hair.

As previously states, MPEP 2131.03 states "If the claims are directed to a narrow range, the reference teaches a broad range, and there is evidence of unexpected results within the claimed narrow range, depending on the other facts of the case, it may be reasonable to conclude that the narrow range is not disclosed with "sufficient specificity" to constitute an anticipation of the claims.-" Applicants assert that it is reasonable to conclude there is evidence of unexpected results within the claimed narrow range, and the facts of the case support that is reasonable to conclude that the narrow range is not disclosed with "sufficient specificity" to constitute an anticipation of the claims.

It has been previously known that higher charge density polymers are superior as deposition aids for small particle dispersed agents. However the present invention has found that by selecting low charge density cationic polymers, although they are less efficient as deposition aids, are in fact better than the higher charge density cationic polymers for providing wet conditioning benefits.

Further, Guskey does not disclose the combination of the alkyl and alkyl ether sulfates and sulfonate surfactants with a low charge density/higher molecular weight cationic polymer. The surfactant agents are listed as one of many possible ingredients in the final shampoo composition. Within the category of cationic deposition polymers, a very large range of cationic charge densities and molecular weights are given. And there are no specific examples of the present invention's combination of an alkyl and alkyl ether sulfates and sulfonate surfactants with a low charge density/higher molecular weight cationic polymer exemplified in Guskey.

The possible shampoo formulations that can be devised by selecting items from Guskey's ingredients number in the hundreds. A shampoo combining a specific deterative surfactant, a conditioning agent such as an organic cationic polymer is only one of these hundreds of possible

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shampoo formulations. There is no embodiment of this specific combination. Therefore, Applicants contend that the Guskey reference does not anticipate the present invention.

Therefore, Guskey does not disclose the present invention. Guskey does not disclose or recognize the relationship that the amount of coacervate actually increases as the charge density of the cationic polymer decreases, and further wherein there is no disclosure in Guskey that the lower charge density cationic polymer will yield higher levels of coacervate when combined with the selection of alkyl and alkyl ether sulfates, sulfonate surfactants, and therefore higher wet conditioning, there is no motivation to select the present invention's lower charge density cationic polymers wherein the cationic polymer is in a complex coacervate phase in the shampoo composition or forms a complex coacervate upon dilution of the shampoo composition with water, as required by the present invention. And there is no motivation to select the specific alkyl and alkyl ether sulfates or sulfonate surfactants.

In summary, Guskey neither discloses the present invention, in view that the prior art range does not anticipate the claimed invention's range, as it is not disclosed with "sufficient specificity" (MPEP 2131.03) nor makes obvious this component of the present invention. Applicants kindly request reconsideration.

Rejection Under 35 USC §103(a) Over Guskey (U.S. Patent 5,977,036)

Claim-27 has been rejected under 35 USC §103(a) as being unpatentable over U.S. Patent 5,977,036 (Guskey). Applicants respectfully traverse this rejection.

In order to establish a *prima facie* case of obviousness, the Examiner must show that (1) there is some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, (2) there is a reasonable expectation of success, and (3) all of the limitations of the claims are taught or suggested in the prior art (M.P.E.P. §2143).

Guskey does not establish a *prima facie* case of obviousness because it does not show there is no suggestion or motivation, either in the reference or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, and there is no reasonable expectation of success established. While the Examiner has asserted that salts are well-known in the art as anti-dandruff agents, there is no suggestion or motivation in Guskey to add an anti-dandruff agent, and further that the present invention contains an anti-dandruff agent. Further there is no suggestion or reasonable expectation established in Guskey that an anti-dandruff agent would be compatible in the present invention's composition.

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The Office Action assert that under MPEP 2144.03 pyridinedione salts are well-known in the art as anti-dandruff agents. However, the prior art does not suggest the desirability of the combination of a pyridinedione salt to the composition of Guskey.

Further, Guskey does not establish a *prima facie* case of obviousness because it does not teach or suggest all of Applicants' claim limitations. Specifically, Guskey does not teach the present invention's requirement and selection of a surfactant component selected from the group consisting of alkyl and alkyl ether sulfates, sulfonates or mixtures thereof, in combination with a lower charge density cationic polymer, namely a cationic polymer with a charge density of from about 0.3 to about 0.8 meq/gm. The selection of this specific surfactant in combination with a lower charge density cationic polymer yields significantly higher levels of coacervate when compared to the compositions disclosed and exemplified in Guskey, as disclosed and discussed above. Claim 27, dependent from Claim 1, also requires this present claim limitation.

Therefore, there is no *prima facie* case of obviousness in view of Guskey. In light of the arguments presented herein, it is respectfully submitted that the rejection of the claims under 35 U.S.C. § 103(a) be withdrawn.

Conclusion

In light of the above remarks, it is requested that the Examiner reconsider and withdraw the rejection under 102(e) and 103(a). Early and favorable action in the case is respectfully requested.

Applicants have made an earnest effort to place their application in proper form and to distinguish the invention as now claimed from the applied reference. In view of the foregoing, Applicants respectfully request reconsideration of this application, entry of the amendments presented herein, and allowance of Claims 1, 3, 6-12, 14-16, 18-23, 25-27 and 38-39.

Respectfully submitted,
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